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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,856

03/22/2006

Hiroshi Ishibuchi

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EXAMINER

NGUYEN, PHONG H

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,856	Applicant(s) ISHIBUCHI ET AL.	
	Examiner PHONG H. NGUYEN	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-30 and 35-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-30 and 35-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 28-30 and 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideo (JP2002-284,430) in view of Michler (6,032,558).

Regarding claim 28, Hideo teaches a method of cutting off a web having a basic weight and being fed at a web feeding speed between a preceding knife cylinder 2 that carries on a peripheral surface thereof a preceding knife 8 and a following knife cylinder 3 that carries on a peripheral surface thereof a following knife 9, said method comprising:

determining an amount of cutting torque ($T_{xa}+T_{xb}$) necessary for the knives to cut off the web, based on the basic weight and the feeding speed of the web (it is to be noted the web has a certain weight and moves with a certain speed and is cut by the knives. Therefore, a specific amount of torque is generated based on the web's weight and speed.); and

while the web is being cut, driving the following knife and the preceding knife respectively with a first torque component T_{xa} and a second torque component T_{xb} of

the cutting torque in the direction in which the preceding knife and the following knife are pressed against each other;

wherein the first torque component T_{xa} and the second torque component T_{xb} have opposite signs (the knife cylinders press against each other; therefore, the torque component have opposite signs).

See Fig. 1.

Hideo does not teach varying the first torque component and the second torque component during a cutting process.

Michler teaches varying torque (by changing speed) during a cutting process for making proper cuts on a web. See Figs. 10-11. It is to be noted that change in speed causes change in torque.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to vary the first torque component and the second torque component during a cutting process as taught by Michler for making proper cuts on the web.

Regarding claims 29, 30 and 42, the modified method of cutting off a web of Hideo does not teach a specific torque pattern. At the time the invention was made, finding a specific torque pattern for cutting a web is merely to do repeated experiments. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to do repeated experiments to obtain the claimed torque pattern in claims 29, 30 and 42.

Regarding claim 35, since the following knife and the preceding knife rotates with different speed as taught by Michler, the first and second torque component have different absolute values.

Regarding claim 36, since the following knife and the preceding knife rotates with the same speed, the first and second torque component have the same absolute values.

Regarding claim 37, with or without the web (the web is not being cut), at the contact point of the knives, the first torque component and the second torque component having the same signs because the force at the contact point points to the same direction.

Regarding claim 38, Hideo teaches the knives running without contacting each other in Fig. 1. In order for the knives running, a torque must apply on the knives.

Regarding claim 39, the absolute values of the first torque component and the second torque component are smaller than absolute values of torque amounts necessary for acceleration since a greater force need to be applied to the cylinders for acceleration.

Regarding claim 40, see Fig. 2 in Hideo.

Regarding claim 41, Hideo teaches the second torque component being given based on the feeding speed and the web's length.

Regarding claim 43, when the speed changes, the torque change, and thus the torque pattern changes.

Regarding claim 44, Hideo teaches the cylinders rotating with the same rotational speed; therefore, the torque pattern of the first torque component and the second torque component are identical.

Response to Arguments

3. Applicant's arguments with respect to claims 28-30 and 35-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment (06/09/2009) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHONG H. NGUYEN whose telephone number is (571)272-4510. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy V. Eley/
Primary Examiner, Art Unit 3724

/Phong H Nguyen/
Examiner, Art Unit 3724
January 4, 2010